As sites were staged to go the 3rd Phase of the OB6 installation the WSR-88D Hotline provided site-specific AWIPS radar file help sheets that had been updated for OB6 to each office. The overview content that was initially provided with the OB6 radar file help sheets for **orpgBackups.txt** evolved substantially over the course of the deployment as more was learned about this new OB6/RPG Build 8 feature. The following overview for **orpgBackups.txt** should supersede what was initially provided with your OB6 radar file help sheet with the exception of the site-specific radar access info that was provided with the initial OB6 radar file help release.

D. **orpgBackups.txt** - This file is new to OB6 and reflects adaptation data for establishing a TCP/IP dedicated-like connection across the AWIPS terrestrial WAN while employing an RPS List for product selection to a Build 8 WSR-88D that is not co-located. This capability is applicable only to WFO AWIPS and select Regional HQ systems at this time.

The file orpgBackups.txt is configured in accordance with NWS Regional directives so that every Build 8 RPG has at least one "primary" and "secondary" non-associated AWIPS assigned to its "WAN Dedicated" port. But note carefully that since this connection is virtually dedicated, only one AWIPS system at a time will be able to employ this feature. If you attempt to establish a connection using this feature and see a radar status feedback message of "**Login Failed**" or **"Connection Refused**", you should assume the port is already being employed by another adjacent AWIPS system. The latter can be confirmed by calling the office controlling the WSR-88D and having them check the status of Product Distribution Comms Status screen line number 29 – the new port that has been created for this connection on the RPG end. Since at least one other office will have access to this port, it is recommended that you discuss strategies for sharing this port as weather situations dictate with that office(s).

WFO-specific guidance provided here - In [site name's] case you will share WAN dedicated access to [Knnn] with [alt backup 1] and access to [Knnn] with [alt backup 2]. WAN OTR access via RMR would be the alternative means of obtaining products while the alternate office is given higher priority access to the WAN dedicated port.

Any radar(s) <u>not</u> on Build 8 at the time your radar file help sheet is generated will be delivered in your orpgBackups.txt file with their radar data lines commented out. In order to determine when the respective radar(s) come up on Build 8 and when you can un-comment out and employ this feature, you will need to periodically survey the Build status of those radars using the URL: http://www.roc.noaa.gov/ops/build.asp .

As noted in the orpgOTRs.txt overview, NWS RPGs on Build 8 will employ aggregate "flow control" up to 128 Kbps (64 Kbps for DoD and FAA Build 8 radars) across this new port and the 4 WAN OTR ports. **Sites designated to employ this feature should be aware that their ability to employ an RPS List for this type of connection could result in their using an excessive amount of the aggregate bandwidth on the adjacent radar, potentially impacting the ability of other NWS users to obtain products via WAN OTR. While employing this feature sites are therefore asked keep the RPS Lists they employ for this feature to an operational minimum**.

You will need to manually create RPS Lists for radar(s) you will connect to over the WAN and those RPS lists will need to reside in /data/fxa/radar/lists. Without having RPS Lists in place, you will not see any data flow upon connection. DR16564 has already been submitted to make the RPS List(s) associated with orpgBackups.txt available via the OTR GUI in a subsequent AWIPS Build. When you establish a WAN Dedicated connection you will cease receiving products from that radar via the SBN. The newly created RPS Lists should therefore include the National RPS List products, which would also be required in the event your office needed to enter into a true 'radar backup' mode for the WAN Dedicated radar. The national lists can be found in /awips/fxa/data/localization/nationalData (/data/fxa/nationalData) and are called rps-RPGOP-tcp.clear-air and rps-RPGOP-tcp.storm.

For example, on ds1, as user fxa: **cd /data/fxa/radar/lists**

Then copy pre-existing Precip Mode RPS Lists for your associated radar for this purpose following the example:

cp –p KNNN.storm.VCP11 /data/fxa/radar/lists/KXXX.storm.VCP11
cp -p KNNN.storm.VCP12 /data/fxa/radar/lists/KXXX.storm.VCP12
cp -p KNNN.storm.VCP121 /data/fxa/radar/lists/KXXX.storm.VCP121

where KNNN equates to RPS List(s) you employ with your associated radar, and KXXX equals RPS Lists you are establishing for the non-associated radar. Ensure the newly created RPS Lists include 65 or fewer products and the National RPS List products as noted above.

In order to further minimize the potential impacts to WAN OTR operations and AWIPS WAN bandwidth utilization, WAN Dedicated connections should only be initiated approximately one hour prior to the onset of the weather condition or feature that necessitates the connection. Similarly, as soon as the weather condition or feature that necessitates the use of a WAN Dedicated connection abates the connection should immediately be terminated.

WAN Dedicated connections are started from the command line as user fxa or by calling the AWIPS NCF at (301) 713-9344 and requesting that the NCF initiate the connection for you.

For users with access to *fxa* the connection is initiated by entering:

~fxa/bin/ORPGCommsMgr <radar>

(where the <radar> is the radar 4-letter mnemonic provided with your site-specific access guidance for orpgBackups.txt. ORPGCommsMgr backgrounds itself, so no ampersand '&' is needed in the command line.).

Depending on whether you are establishing a WAN Dedicated connection for **routine operational purposes** or for **true radar backup purposes** (where the 'host' WFO AWIPS will be down for any length of time and your office has been asked to resume distribution of the radar data to central collection), perform the following additional steps:

Scenario A – Routine Operational Purposes:

1. Make sure /awips/fxa/data/orpgBackups.txt has been updated on DS1 and DX1 (or wherever dsswap and dx1apps are running).

… **as user fxa**

2. start ORPGCommsMgr KXXX on DS1 (or wherever dsswap is running).
3. stop/start ingest on DX1 (or wherever dx1apps is running), or just kill the RadarStorage (will be restarted by its DataController), and kill the RadarServer and restart by typing "/awips/fxa/bin/RadarServer &".
4. Tail ORPGCommsMgr log on DS1 to make sure RPS list was sent and data is being received.

Scenario B - True Radar Backup Purposes:

1. Make sure /awips/fxa/data/orpgBackups.txt has been updated on DS1 and DX1 (or wherever dsswap and dx1apps are running).

2. Make sure you have the latest revision of wmoSiteInfo.txt installed (see: / awips/fxa/data/wmoSiteInfo.txt) that includes the 3-letter mnemonic associated with the new WAN Dedicated radar(s) you have access to. By default your office will <u>not</u> be the sending site for these radars so the 'send flag' (to central collection) will be "N" (NO !). Modify the send flag in wmoSiteInfo.txt on both DS1 and DX1 and change it from "N" to "Y" (Yes) in order to start sending that radar's data to central collection.
3. Change the default setting of "3" in radarsInUse.txt – (/awips/fxa/data/localizationDataSets/XXX/radarsInUse.txt) to "2" on DS1 and DX1 or wherever dsswap and dx1apps are running.

… as user fxa

4. start ORPGCommsMgr KXXX on DS1 (or wherever dsswap is running).
5. stop/start fxa ingest on DX1 (or wherever dx1apps is running), or just kill the RadarStorage (will be restarted by its DataController), and kill the RadarServer and restart by typing "/awips/fxa/bin/RadarServer &".
6. Tail ORPGCommsMgr log on DS1 to make sure RPS list was sent and data is being received.
7. In parallel with going into a true radar backup mode, please phone and notify the AWIPS NCF. In parallel with changing the sending site for the radar data, NCF may need to also make some WMO Header changes so that the re-distribution of the radar's data to central collection is transparent to downstream systems. This could also affect surrounding NWS

sites that would ordinarily receive and process the radar data from the 'host' WFO site ID via the SBN.

8. When notified that the *host* WFO is ready to resume sending responsibility for the radar being backed-up, un-do the changes made in Steps 2 and 3. Restore the 'send flag' to "N" in wmoSiteInfo.txt on both the DS1 and DX1. Restore the default setting of "3" in radarsInUse.txt – (/awips/fxa/data/localizationDataSets/XXX/radarsInUse.txt) on DS1 and DX1 or wherever dsswap and dx1apps are running.

Terminating the WAN Dedicated Connection:

When you are ready to end the WAN Dedicated connection, run the following command **as user fxa**:

~fxa/bin/stopORPGCommsMgr <radar> (this will stop the ingest from <radar>).

At this point, the SBN feed to the backup radar should start back up again. If the SBN data does not start back up, restart the RadarStorage process on DX1 by killing the PID and allowing the DataController to restart it.

 # Radar Radar ORPG IP TCP Link TCM RPS List
 # Name ID address port index access maxRPSsize
 # ------- ------ ----------- ------ ---- -------- ----------------
 # WFO-specific guidance provided here